



## **Request for City Council Committee Action From the Department of Public Works**

**Date:** December 2, 2003  
**To:** Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee  
**Subject:** **Hiawatha Light Rail Transit - Establishment of three vertical clearance routes to accommodate transport of Xcel Energy's power transformers**

### **Recommendation:**

Public Works recommends that the City Council:

1. Rescind Council Resolution 86R-147 establishing a vertical clearance route on certain City streets to accommodate Northern States Power Company's transporting of power transformers, which route should now take the Hiawatha Light Rail Transit line into consideration.
2. Resolve to establish one route with a minimum vertical clearance height of 18' from curb face to curb face and two routes with a minimum vertical clearance height of 18.5' from curb face to curb face (as shown on map on file in the Office of the City Clerks) for all future pedestrian bridges or other permanent street crossings to be constructed above the roadways on certain City streets as described in the attached Committee report.
3. Direct the City Engineer to ensure that these routes be maintained free of new encroachments as specified in the Council Resolution.

### **Previous Directives:**

Council Resolution 86R-147 establishing a vertical clearance route on certain City streets to accommodate Northern States Power Company's transporting of power transformers.

**Prepared by:** Heidi Hamilton, P.E., Principal Professional Engineer, 673-3439

**Approved by:**

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Klara A. Fabry, P.E., City Engineer, Director of Public Works

**Presenters:** Heidi Hamilton

### **Financial Impact** (Check those that apply)

☒ **X** No financial impact - or - Action is within current department budget.  
(If checked, go directly to Background/Supporting Information)

- ☐ Action requires an appropriation increase to the Capital Budget  
☐ Action requires an appropriation increase to the Operating Budget  
☐ Action provides increased revenue for appropriation increase  
☐ Action requires use of contingency or reserves  
☐ Other financial impact (Explain):

☐ Request provided to the Budget Office when provided to the Committee Coordinator

**Background/Supporting Information Attached:**

Xcel Energy has an electrical substation located underground in the northwest corner of 5<sup>th</sup> Street South and Nicollet Mall. There are four transformers within this substation that have dimensions of up to approximately 10' x 16' x 16' tall and weigh over 130 tons each. These transformers are used to supply power to most of downtown Minneapolis.

Upon the failure of one of these transformers, Xcel will need to remove the transformer from the substation and transport it to a repair facility. In order to transport the transformer, a route to the repair facility must have a minimum vertical clearance of 18' and adequate turning radii for the required truck. A minimum vertical clearance of 18.5' is preferred in order to avoid additional restrictions on the type of truck that would be needed to transport the transformer. Minneapolis City Council Resolution 86R-147 established such a route on city streets between the Xcel substation and a rail transfer site at which the transformer would be transferred to a rail car for transport out of the City. This route on city streets was established so that no pedestrian bridges or other obstructions would be constructed across city streets in conflict with transport of the transformers. The route designated in 86R-147 is shown on Attachment A.

The Hiawatha Light Rail Transit's Warehouse Station now obstructs the route designated in Resolution 86R-147. Accommodations are being made by the Hiawatha LRT project to allow a transformer to be transported from the substation on 5<sup>th</sup> Street South to Nicollet Mall or Hennepin Avenue, from which point Xcel has identified unencumbered routes to two acceptable rail transfer sites. These accommodations include construction of a removable overhead electrical contact system (OCS) on this block of 5<sup>th</sup> Street South. This system will permit the block to be cleared of obstructions to permit the removal and replacement of a transformer in the substation. The LRT will be able to continue operations east of Nicollet Mall while the OCS poles and wires between Nicollet Mall and Hennepin Avenue are temporarily removed.

We have worked with Xcel to determine three new routes on which minimum clearances should be reserved to ensure that the removal and replacement of a transformer at the substation without excessive effort and cost is permissible after LRT construction is complete. Although only one route is needed, we believe it is wise to reserve the three recommended routes at this time in order to ensure maximum flexibility in the future. By reserving three routes, the City may choose to eliminate a route if a development opportunity presents itself that would infringe upon the clearance of one of the routes.

Therefore, we recommend the establishment of two routes with a minimum vertical clearance height of 18.5' from curb face to curb face, and one route with a clearance height of 18' from curb face to curb face, for all future pedestrian bridges or other permanent street crossings to be constructed above the roadways on certain City streets as shown on Attachments A and B and described below to accommodate Xcel Energy's transportation of power transformers. Only 18' is reserved on Route A because one skyway is already in place at this height on this route.

The Minneapolis Central Library Project Office has reviewed and has no objections to Route B, which runs adjacent to the new Central Library. The Minneapolis Skyway Advisory Committee recommended approval of these route designations at their November 20, 2003 meeting. CPED has also reviewed and concurs with the recommended routes.

### **Route A – 18' Vertical Clearance from curb face to curb face**

5<sup>th</sup> Street South – between Nicollet Mall and Hennepin Avenue to  
Hennepin Avenue – south to  
7<sup>th</sup> Street North – west to  
1<sup>st</sup> Avenue North – south to  
Hawthorne Avenue North – south to  
11<sup>th</sup> Street North – northwest to  
Glenwood Avenue - west to  
Colfax Avenue North – south to

### **Routes B & C – 18.5' Vertical Clearance from curb face to curb face**

5<sup>th</sup> Street South – between Nicollet Mall and Hennepin Avenue to  
Nicollet Mall (Route B) and Hennepin Avenue (Route C)– north to  
Washington Avenue – east to  
Marquette Avenue – north to  
1<sup>st</sup> Street South – east to  
3<sup>rd</sup> Avenue South – south to  
2<sup>nd</sup> Street South – east to  
Portland Avenue South - south to  
Washington Avenue South – east to  
Cedar Avenue South – south to  
Riverside Avenue – southeast to  
26<sup>th</sup> Avenue South – south to  
Minnehaha Avenue - south to  
East 40<sup>th</sup> Street – west to  
Railroad transfer site

Attachment A: Existing Downtown Transformer Route and Proposed Route "A"  
Attachment B: Proposed Transformer Routes "B" & "C"

cc: Corey Conover, City Attorney  
Doug Maday, Traffic and Parking Services  
Mike Sachi, Traffic and Parking Services  
Paul Ogren, Engineering Service  
Jack Byers, CPED  
Dennis Morris, Public Works Right of Way  
Rick Johnson, Minneapolis Central Library Project Office  
Frank Brust, Downtown Council/Skyway Advisory Committee  
Jeanne Matrosse, Metro Council  
Ed Hunter, Hiawatha Project Office  
Dan Pfeiffer, Xcel Energy